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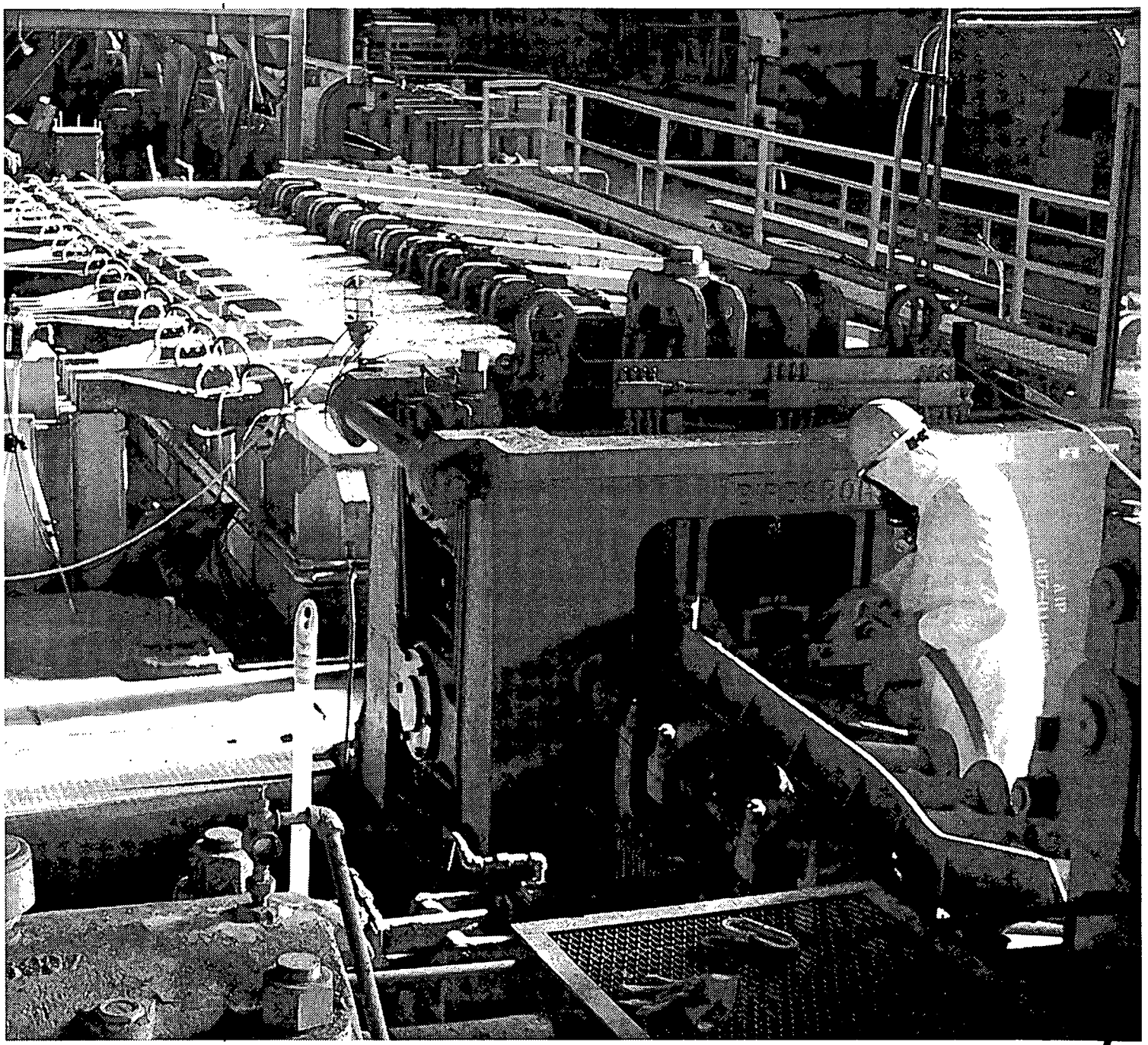
fernald Report

Inside

- Over 30 buildings demolished!
- DOE seeks input on land use
- Recycling makes a difference

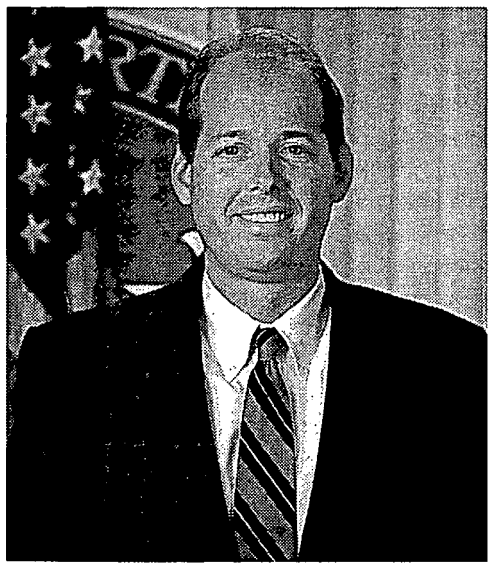
August 1998



message from
Jack Craig

Fernald employees - history of giving

I have always been impressed by the willingness of Fernald employees to reach out to those who are less fortunate. In 1997 when floods swept over the tristate, volunteers were eager to assist in the cleanup and many more were quick to donate money and supplies to people in need. When 12-year-old Nikki Johnston, who has cerebral palsy, had her voice computer stolen, volunteers helped raise the $7,000 needed to give this little girl her voice back. When tornados devastated Harrison, Ohio; Bright, Indiana and nearby Crosby Township, a task force of volunteers, led mostly by members of the Fernald Atomic Trades and Labor Council, stepped forward to donate trucks, chainsaws, gasoline, heavy equipment and their time, in order to speed the recovery.



While Fernald employees are eager to respond in times of great need, they are also ready to answer everyday needs that might otherwise go unheard. As you will read later in this report, a Habitat for Humanity home was recently completed in South Cumminsville for the Johnson family. Dozens of Fernald volunteers spent their evenings and weekends working, so that a couple and their young son could have a fresh start in a new environment. Employees in the Facilities Closure and Demolition Project started working at the New Beginnings home for abused girls last year. This group of volunteers fixed up a recreation room, library and kitchen, prepared dinner at Thanksgiving and even purchased dresses so that two young ladies would have something new to wear to their high school prom. What started with one division has quickly spread to a number of organizations and even more volunteers.

Though Fernald employees give their time without thought of recognition, it was a tremendous honor last year when the Fernald Community Involvement Team received the Cincinnati Association of Volunteer Administrators "Outstanding Corporate Volunteer Program" Award. That was quite an accomplishment considering we were judged against companies like P&G, Cinergy, and Federated.

The biggest fund-raising efforts we have each year are the Combined Federal and United Way Campaigns. Last year these committees set a combined goal of $122,000. When the final results came in, the goal was exceeded by nearly $27,000!

Over the next few months, as both of these campaigns kick off, I am sure our employees will again step up and choose to make a difference. I think all of us have a vested interest in the programs that help strengthen our community. So while we work to clean up this former cold war production facility, we're also helping to give people the chance and the opportunities we've been fortunate to receive.

Jack Craig
Director, DOE-Fernald

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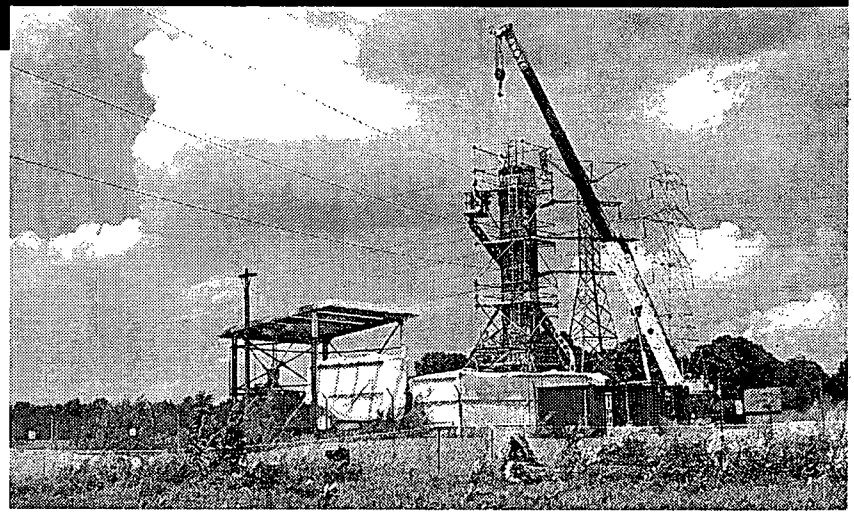
On the Cover: *Safe shutdown personnel clear out material left in the rolling mill in the west side of Plant 6 (6639D-0083).*

Landscape changing at Fernald with 36 buildings down



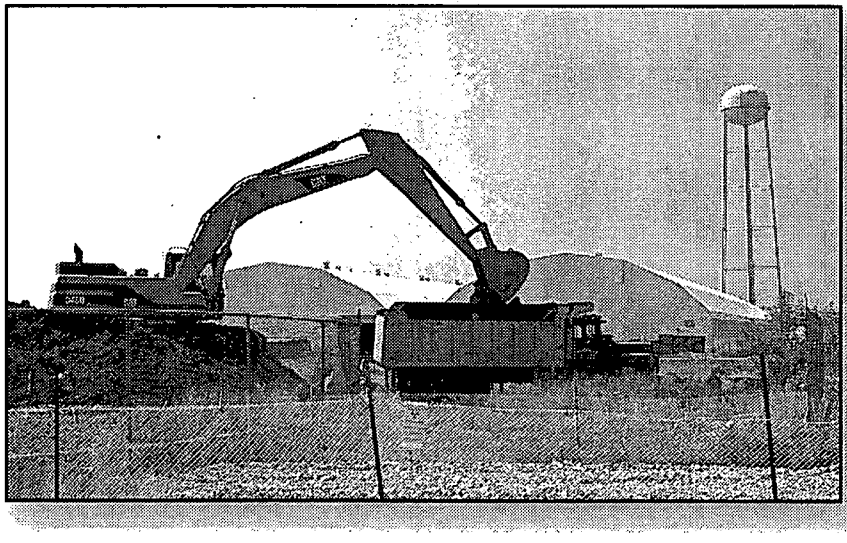
If you haven't visited the Fernald site recently, you might not recognize it. In July, employees within the Facilities Closure and Demolition Project brought the total of structures demolished to 36, drastically changing the site's landscape.

In 1994 Plant 7 was the first of approximately 200 buildings demolished at Fernald. The most recent was the Boiler Plant, which was pulled to the ground on July 23. "What's really impressive is that we're able to demolish major complexes while still making progress dismantling smaller structures and moving forward with Safe Shutdown," said John Trygier, the DOE-Fernald team leader responsible for overseeing decontamination and dismantlement (D&D) activities at the site. "The fact that we've been able to implement this aggressive schedule safely is a major accomplishment. The work we're doing clears the way for the On-Site Disposal Facility and soil remediation activities."

Above: Wise Construction places a containment structure around the incinerator stack at the old Sewage Treatment Plant (6620D-0093.)

According to Trygier, putting together comprehensive contract packages enables work to progress more smoothly in the field. "Every time we do this we get a little smarter about it," he said. "It's to the point now where we know ahead of time exactly what information the contractor is going to need from us, and they know what they're expected to do. This kind of efficiency saves us time and money."

The next major building set for demolition is Plant 9, the former Special Products Plant. All D&D activities at the site are scheduled to be completed by 2005.



Above: Over 11,500 cubic yards of soil were placed in Cell 1 from Stockpile #5 (6319D-1389.)

Southern Waste Units become an excavation site

As of August 12, approximately 83,000 cubic yards of material and debris has been placed in Cell 1 of the On-Site Disposal Facility (OSDF). This includes the first waste actually generated from the former production area (Soil Stockpile #5). Debris and contaminated waste have been going into Cell 1 at an average of ten roll-off containers per day (a roll-off container holds approximately 30 cubic yards). On July 15, excavation of the Southern Waste Units (SWUs) began, starting with the Inactive Flyash Pile. On July 23, dump trucks with a capacity of approximately 16 cubic yards began hauling waste from the SWUs to the OSDF via the Haul Road and have been averaging 100 trips per day.

A group within the Soil & Water Project called the Waste Acceptance Organization oversees and verifies that everything placed in the OSDF meets the requirements in the *Waste Acceptance Criteria Attainment Plan* and the *Impacted Material Placement Plan.* They provide full-time field oversight of all soil excavations, debris generated from decontamination and dismantlement projects, placement of soil and debris in the OSDF, and inspection and maintenance of soil stockpiles.

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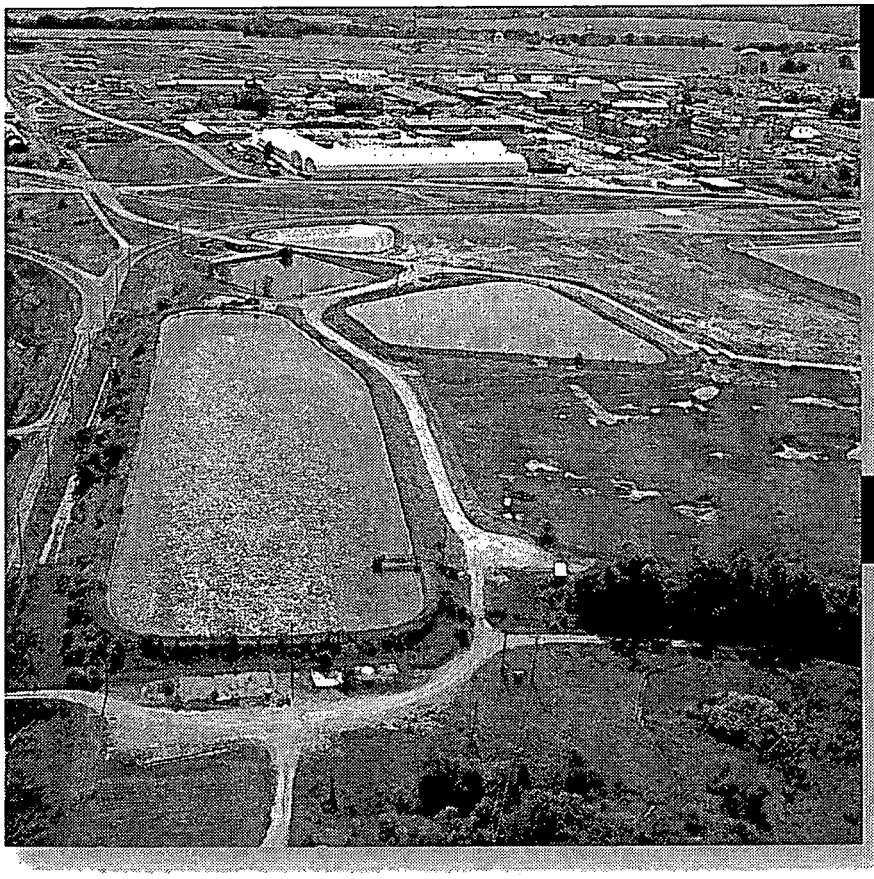
Cleanup **Progress** Update



Waste Pits Remedial Action Project (WPRAP)

- Authorized mobilization for International Technology Corporation (IT) to begin treatment facility construction on July 28, 1998
- Continued construction of rail and access road lighting
- Submitted Waste Acceptance Profile to Envirocare for preliminary acceptance of waste pit material

On-Site Disposal Facility (OSDF)

- Began preparation of Clay Borrow Area (located east of Fernald Site South Access Road)
- Began construction of Cell 2 compacted clay liner
- Resumed placement of waste into Cell 1 on July 2, 1998
- Began Cell 3 excavation

Above: It is expected to take 5500 gondola railcar shipments to remove all of the material from the Waste Pits (6901-112).

Right: Approximately 100 trucks per day are washed down as they leave the Southern Waste Units and the OSDF (6319D-1408).

Far right: Joe Kozloski monitors bags of construction waste at the OSDF to ensure they meet the Waste Acceptance Criteria (6319D-1437).

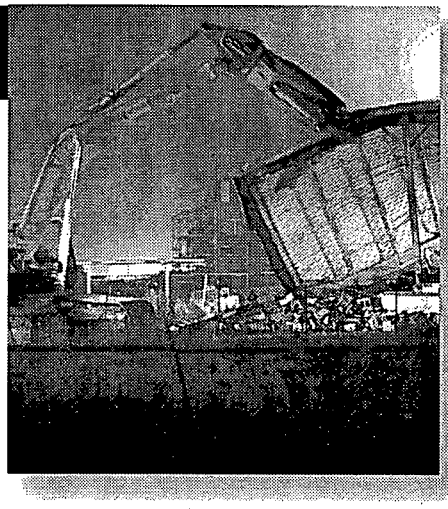
Facilities Closure & Demolition Project (FC&DP)

Safe Shutdown

- Plant 2/3 — Continued asbestos and biohazard material removal
- Plant 6 — Continued biohazard cleanup, holdup material removal and utility disconnects; processed 1,000 gallons of sodium hydroxide/sodium sulfide mixture
- Non-Nuclear Facilities — Performed various utility disconnects; isolated fire protection line for Cooling Tower

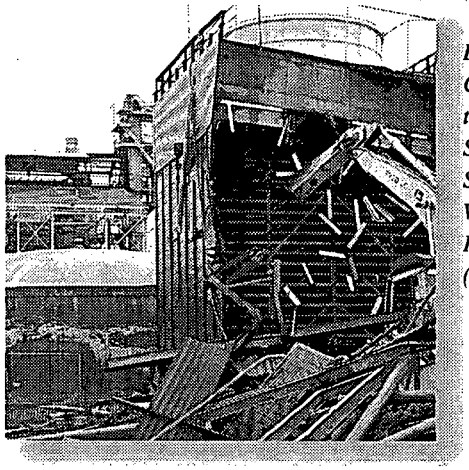
Decontamination & Dismantlement

- Boiler Plant/Water Plant —
  - Completed demolition of remaining Boiler Plant structure
  - Demolished old Cooling Tower
- Thorium/Plant 9 Complex —
  - Completed D&D of Building 78 and 69
  - Removed excess equipment in Building 9C
  - Completed floor scabbling in various areas of Plant 9
- Sewage Treatment Plant Complex —
  - Initiated dismantlement of incinerator (Building 39D)
  - Demolished Skeet Range Building (Building 28F)
- Miscellaneous Small Structures —
  - Initiated D&D of Building 38
- Maintenance/Tank Farm Complex —
  - Awarded demolition contract to NSC Energy Services, Inc., on July 1, 1998
- Recycling Supplemental Environmental Projects —
  - Decontaminated 103 tons of rail as of July 31, 1998



Left: A shear makes quick work of Building 69 on an early morning in July (6494D-0450).

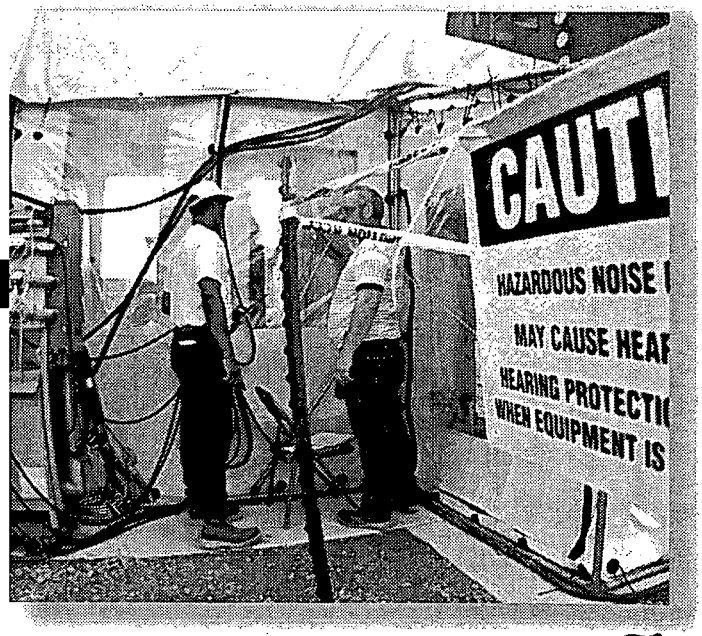
Below left: It took only one day for Foster/Wheeler personnel, along with help from some heavy equipment, to take down the Water Cooling Tower (6407D-0687).



Below: Crews prepare to take samples from Silo 3 as part of the Small-Scale Waste Retrieval Project (6759D-0254).

Silos Project

- Received draft Work Plan and *Quality Assurance/Quality Control Plan* submittals from Silos 1 and 2 Proof-of-Principle Testing contractors
- Continued retrieval of material from Silo 3 for treatability testing
- Reviewed technical proposals received for remediation of Silo 3
- Awarded contract for Silos Infrastructure Trailer Upgrade to Kelchner Environmental



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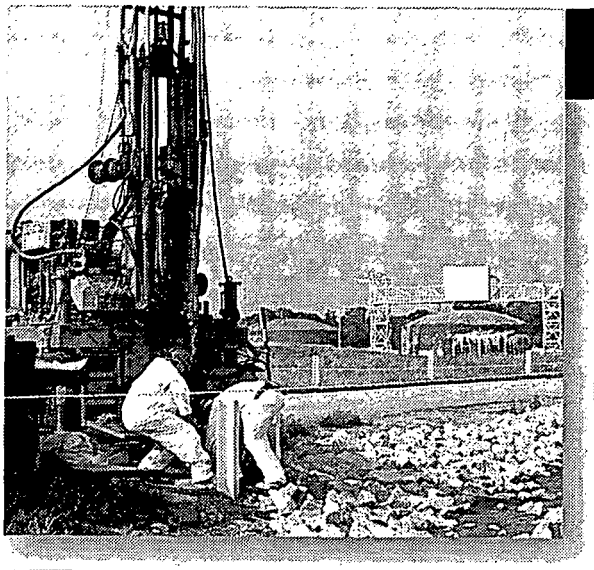
Cleanup **Progress** Update

Right:
Fernald workers remove abandoned water monitoring wells in order to make way for construction near the waste pits (6916D-0001).

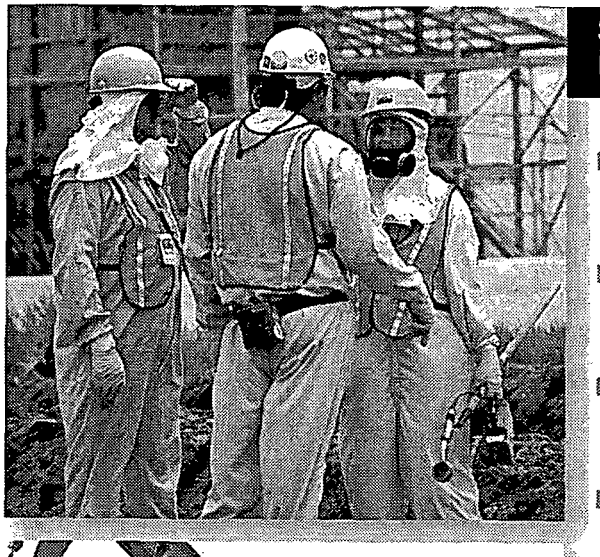
Center:
A radiation technician briefs co-workers on monitoring results before reentering an excavation area (6319D-1354).

Bottom:
A Waste Acceptance Official oversees a truck being loaded with material from the Inactive Flyash Pile (6734D-0634).



Aquifer Restoration & Wastewater Project

- Completed Standard Startup reviews for South Field Extraction System and began operations on July 13, 1998
- Submitted Substantive Permitting Cross-Walk for Sludge Removal Systems Project to regulatory agencies on July 28, 1998
- Continued preparations for Standard Startup Reviews for South Plume Optimization and Injection Demonstration modules; both are slated to begin operations in August

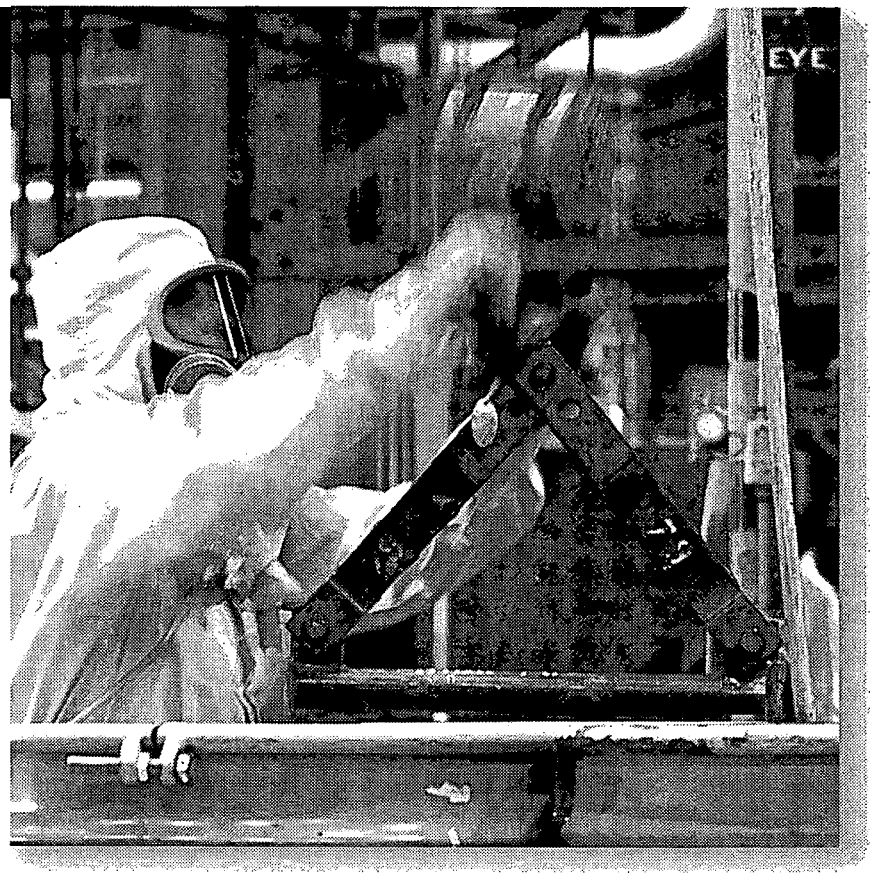


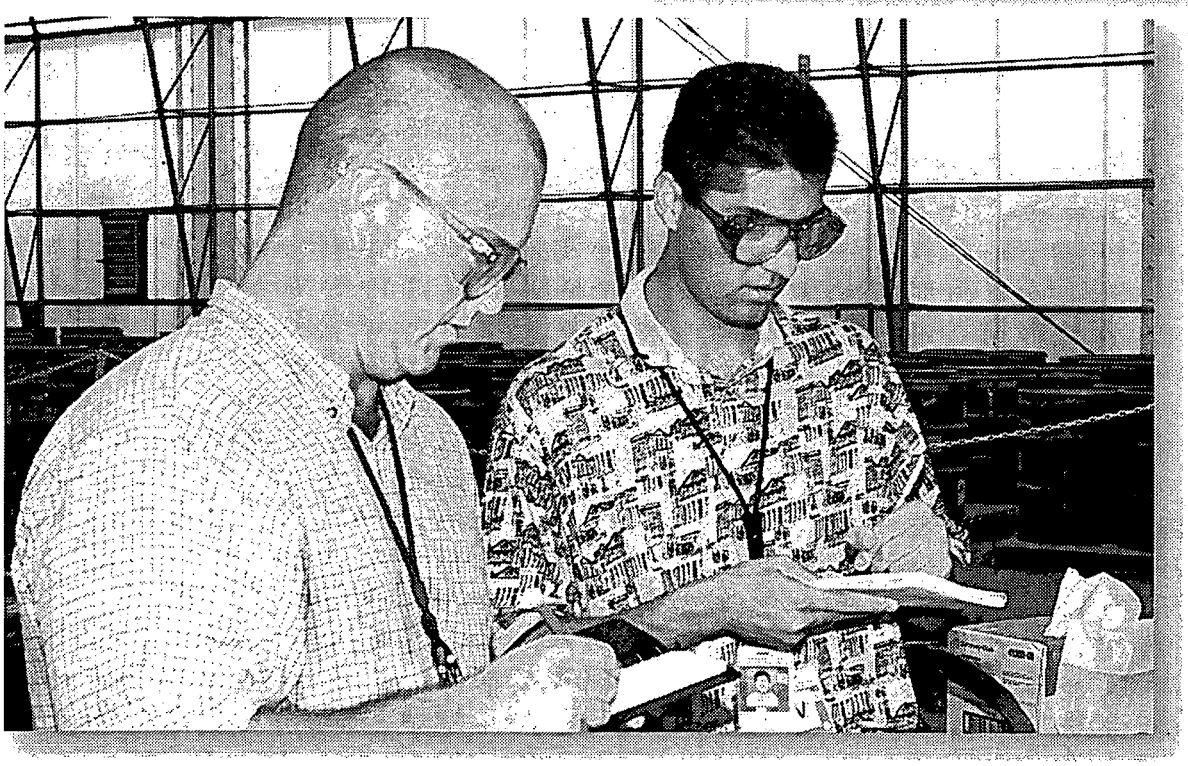
Soil Characterization & Excavation Project

- Completed bioengineering stabilization at Paddys Run embankment in vicinity of Southern Waste Units retention basins
- Mobilized contractor for excavation of areas within Southern Waste Units; completed excavation of Stockpile 5
- Submitted Certification Report for Area 8 Phase I (13-acre tract centrally located west of Paddys Run) to regulatory agencies on July 31, 1998
- Natural Resource Restoration
  - Submitted Revised Natural Resource Impact Assessment and Natural Resource Restoration Plan to regulatory agencies on July 28, 1998
  - Continued public involvement process regarding final land use at Fernald with presentations to Ross and Morgan Township Trustees

Waste Management Projects

- Neutralization/Precipitation/Deactivation/Stabilization Project — Treated 209 drums of waste materials in July, bringing project total to 1,033 drums
- Low Level Waste Shipping — Nevada Test Site (NTS) Surveillance Team came to the site July 28-31, 1998, to perform an audit of Fernald's Waste Packaging and Shipping Program; results of the audit are expected by the end of August
- Nuclear Materials Disposition Operations — Loaded 18 International Shipping Organization (ISO) containers of uranium trioxide in support of shipments scheduled for September
- T-Hopper Repackaging System — Restarted operations on July 23, 1998 after successful equipment repair; total of 66 T-Hoppers repackaged as of July 31, 1998





Above:
An operator repackages ingots for shipping (6826D-0034).

Left:
Bruce Davis, Fluor Daniel Fernald, and Gary Pyles of Bechtel Nevada, review Fernald's Waste Shipping Program as part of the Nevada Test Site audit (6943D-0011).

Technology cuts path through site

Fernald's Technology Programs Department submitted a winning Accelerated Site Technology Deployment (ASTD) proposal to help fund the decontamination and decommissioning of several structures using new technologies, including oxy-gasoline torches and a track-mounted shear.

The track-mounted shear can cut large metal I-beams (up to 8 inches wide and 3/8 of an inch thick) and other structural steel more safely and efficiently than other segmenting methods. The shear, which arrived in July, has already been used to demolish the Skeet Range Building, Chlorination Building, and part of the Digester and Control Building. After the shear is finished with these facilities, it will be used to help dismantle other structures at Fernald.

Above: A new track-mounted shear cuts steel and concrete safely and efficiently during building dismantlement (6620-D0153).

This is how Silo 2 looked in the winter of 1951- notice the convenient parking (78).

Waste retrieval project moves forward

DOE and Fluor Daniel Fernald are making progress with the Accelerated Waste Retrieval Project, which involves retrieving material from Silos 1 and 2 and placing it in transfer tanks for temporary storage pending final treatment and offsite disposal.

On May 26, Fluor Daniel Fernald issued *The Silos 1 and 2 Accelerated Waste Retrieval Request for Proposal.* Contractors interested in retrieving and storing the silo material are required to submit proposals by September 14. Fluor Daniel Fernald will evaluate the proposals and award a contract for the Accelerated Waste Retrieval Project by mid-February 1999.

The selected contractor will be responsible for the design, construction, testing, full-scale mockup tests, and operation of Waste Retrieval Systems, Radon Control System and Transfer Tank Area. The Waste Retrieval System will retrieve the contents of the silos, and transfer the material to the Transfer Tank Area. The contractor will also perform gross decontamination of the silos.

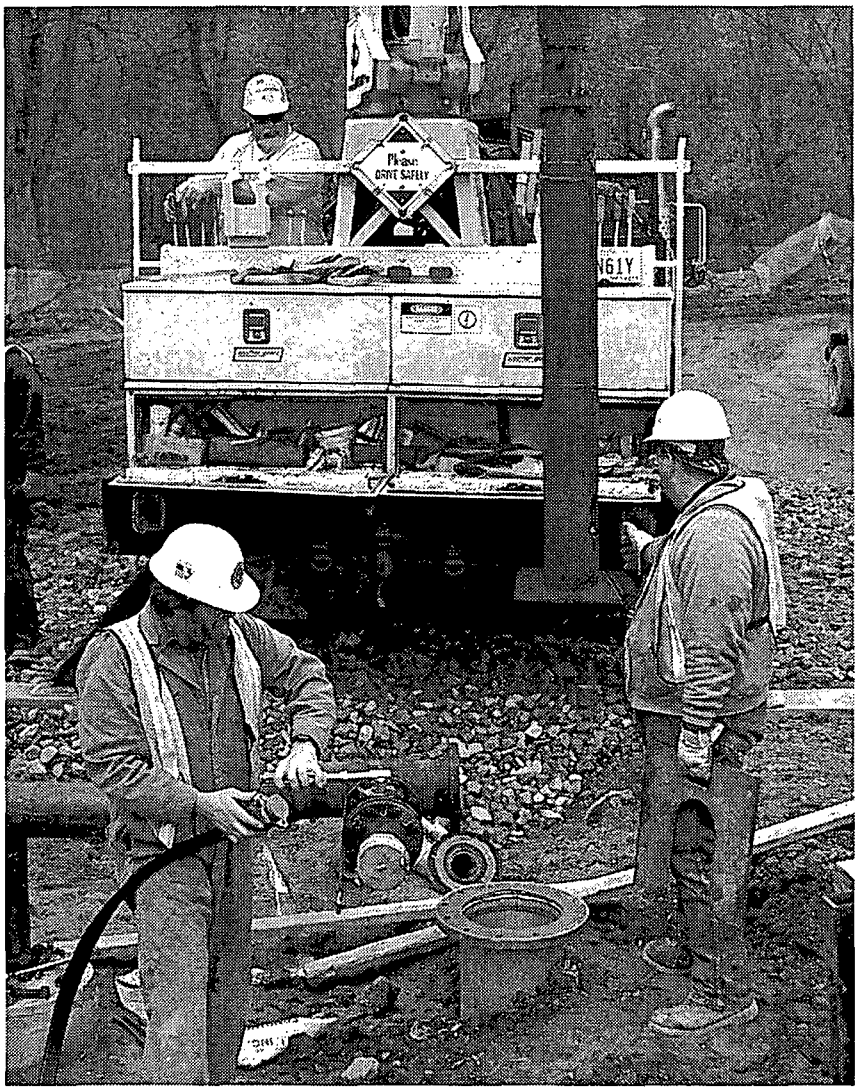
The Transfer Tank Area will provide a temporary storage area and secondary containment for the materials pending final treatment and offsite disposal. Radon control, environmental and radiation monitoring will be conducted for the duration of the project.

The full-scale mock-up test will involve testing of the waste retrieval system by retrieving non-radioactive surrogate material from Silo 4. This mock-up test will validate the design of the waste retrieval system to be used on Silos 1 and 2.

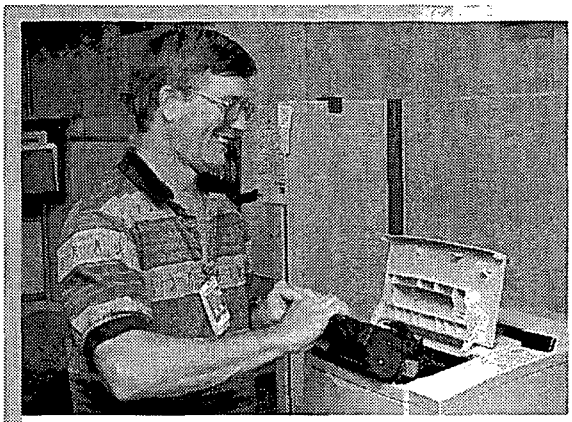
Aquifer cleanup begins

In an effort to accelerate the cleanup of the Great Miami Aquifer, several projects are now underway. Ten extraction wells, known as the South Field Extraction System, began pumping contaminated groundwater from the aquifer on July 13, 1998. These new wells are extracting contaminated groundwater at a rate of 1475 gallons-per-minute (gpm). When combined with the existing South Plume Extraction System wells, the combined pumping rate is nearly 3000 gpm.

The 10 South Field extraction wells are designed to remove contaminated groundwater from the South Field area where uranium groundwater contamination levels are greater than 1000 parts-per-billion (ppb). The proposed Environmental Protection Agency drinking water level standard is 20 ppb. The extracted groundwater is being pumped to the Advanced Wastewater Treatment Facility for treatment and then discharged to the river. Later this summer when other aquifer restoration projects are initiated, some of the treated water will be injected back into the aquifer.



Above: Construction of the South Field Extraction System began in September 1997 and was completed in April 1998 (6261D-420).



Over the years Fernald has saved about $500,000 recycling toner cartridges like the one Jerry Erfman is pulling from this printer (6918D-011).

Fernald recycling boosts cleanup, saves thousands

What started out as a small recycling project by a few Fernald employees in the early 1990s has saved millions of dollars, generated revenue for the site and community, and diverted thousands of pounds of materials destined for landfills.

Jack Craig, DOE-Fernald director, said that recycling and waste minimization have been important to Fernald's cleanup mission. "Through some creative ideas by our employees, we have decreased our disposal costs and reduced materials which would have been declared waste and provided a source of revenue to local schools and community groups," Craig added.

Over the past few years, DOE and Fluor Daniel Fernald have donated or sold over 400,000 pounds of non-hazardous chemicals; established contracts to provide decontamination and recycling services for scrap metals; diverted thousands of pounds of materials, such as packaging and laundry bags, to reuse options; and developed partnerships with local schools and organizations to recycle or reuse office materials and beverage cans.

In 1997, the DOE Ohio Field Office named Fernald as the lead coordination office for pollution prevention and waste minimization efforts for the five project office sites. Over the last two years, Fernald has received funding from the DOE Office of Pollution Prevention (EM-77) to sponsor special waste minimization projects that benefit sites throughout the DOE complex.

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DOE to seek public input for final land use

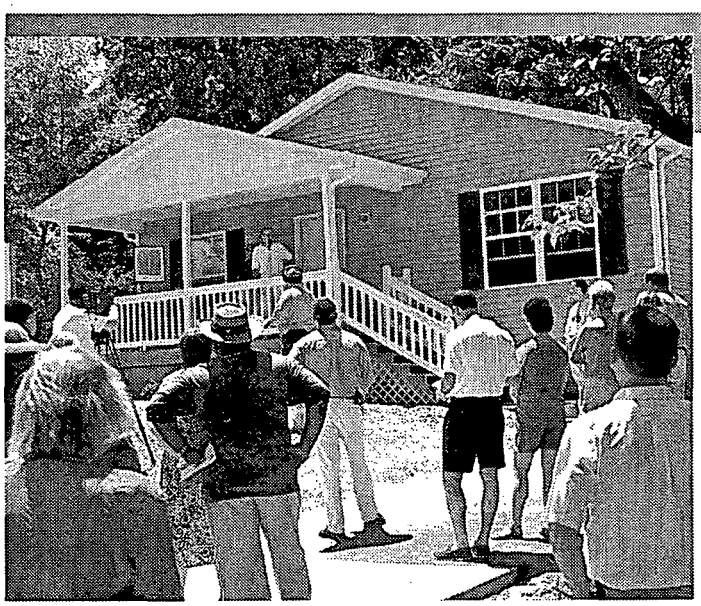
Over the next few months, the public will have an opportunity to provide input and suggestions to DOE on potential final land use options for the Fernald site once cleanup activities are complete.

The Fernald Natural Resource Trustees will initiate a public involvement process in September with the release of the Natural Resource Restoration Plan (NRRP). The trustees include representives from DOE, the U.S. Department of Interior, and the Ohio EPA (representing the State of Ohio). The NRRP outlines specific restoration activities to compensate for impacts to natural resources resulting from past Fernald production operations. The trustees will hold a public forum on Sept. 23, 1998 to discuss the plan and address questions and concerns.

In parallel with the public release of the NRRP, DOE will issue an Environmental Assessment (EA) under the National Environmental Policy Act (NEPA) for a 30-day public review period. The EA provides a concise summary of the NRRP and includes additional information regarding final land use (e.g., potential economic development area). DOE will present its preferred alternative in the EA and welcomes input from the public.

DOE will hold a public hearing on final land use at Fernald as the feature topic of the October Cleanup Progress Briefing. Stakeholders can submit oral or written comments at the hearing or during the public comment period, which will end in mid-October.

Above: The proposed natural resource restoration for the majority of the site will include forests, tallgrass prairie, wetlands and open water (6924-1).



Over 50 volunteers and city officials, including Councilman Phil Heimlich, were on-hand to celebrate Cincinnati's newest Habitat Home (6725D-0146).

Dedication of a three-room dream

The home at 3829 Herron Avenue is a dream come true for Bud and Maria Johnson. On July 12, 1998, friends, neighbors and sponsors gathered to dedicate the area's latest Habitat for Humanity project.

Since it was founded in 1985, Habitat volunteers have built thirty-one homes throughout Cincinnati. The Habitat mission is to provide affordable housing opportunities for low-income families. The "partner families" are required to invest 500 "sweat equity" hours into the building of their new home and pay the mortgage.

An emotional Maria Johnson thanked Fluor Daniel Fernald for donating $10,000 to sponsor a portion of her new home. There were also numerous volunteers from Fernald who contributed a significant amount of time toward construction. John Bradburne, president and CEO of Fluor Daniel Fernald commented, "We're really privileged to be a part of this project. It was nice to see how this family and the neighborhood pulled together."

Fernald volunteers have already started working on a second house, which is also located on Herron Ave. This home is slated to be built by the end of the year.

Recent Tours

It was time to get re-acquainted as 20 retirees returned to Fernald to take a site tour. They met at the Alpha Building to reminisce and view recent photos and videos of current cleanup projects prior to boarding the bus. Everyone received the DOE publication *Linking Legacies* which focuses on connecting the Cold War nuclear weapons production processes to their environmental consequences, and features several photos of Fernald during the production years. The retirees plan to make this tour an annual event.*(6810-0108)*

On July 15 two representatives from the Atomic Energy of Canada Limited (AECL) visited Fernald to learn about the On-Site Disposal Facility (OSDF). Ontario faces similar soil contamination issues and engineers are interested in the design and construction aspects of the OSDF.

Left: Standing at the OSDF (l to r) Bill Zebick, Fluor Daniel Fernald OSDF construction mgr.; Gary Vandegast and Robert Zelmer, AECL; Jay Jalovec, DOE OSDF project mgr; and Mike Hickey, Fluor Daniel Fernald OSDF project mgr. (6810-D109).

Some DOE representatives from Washington D.C., Battelle, Portsmouth, and West Valley attending the Ohio Field Office Workshop on Waste Minimization August 12 and 13 in Dayton, Ohio traveled to Fernald for a site tour.

Right: Accompanying the group were Alisa Rhodes (third from right) Fluor Daniel Fernald and Dave Rast (far left) DOE-Fernald (6810D-122).

BULK RATE

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New documents added to the Public Environmental Information Center

The following information was recently added to the Public Reading Room, Administrative Record files and Post Record of Decision files at DOE's Public Environmental Information Center (PEIC):

On-Site Disposal Facility and Soil Characterization & Excavation Project

- Lessons Learned from the On-Site Disposal Facility Phase I Construction
- The Revised Certification Design Letter and Project Specific Plan for Area 1, Phase I Sediment Traps 2 And 3
- Area 1 Stockpile Inventory and Waste Acceptance Criteria Attainment Report
- Final Sitewide Excavation Plan Response to Comments

Miscellaneous

- Final Transportation and Disposal Plan for Operable Unit 1
- The Final Habitat Area Project Work Plan
- 1997 Integrated Site Environmental Report
- Results from Ohio EPA's review of Fernald's 1997 Resource Conservation Recovery Act Annual Report
- Fiscal Year 1999 Forecast of Waste Volumes to be transported to the Nevada Test Site
- The Integrated Environmental Monitoring Status Report for the First Quarter of 1998
- Ohio EPA Discharge Monitoring Reports for Fernald
- Summary of the July 14 Cleanup Progress Briefing

Fernald Report
Gary Stegner, Public Information Director
U.S. Department of Energy
Fernald Environmental Management Project
P.O. Box 538705, Cincinnati, OH 45253-8705
Telephone: 513-648-3153,
E-Mail: **Gary_Stegner@fernald.gov**
Fernald Web Site: **www.fernald.gov**

DIANE RAYER
FERNALD PEIC
10995 HAMILTON-CLEVES RD.
HARRISON, OH 45030

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